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ABSTRACT

The document is one of nine units developed to provide relevant instruction to apprentices preparing for a variety of trades. The program provides sufficient flexibility for the development of instruction to meet the specific needs of apprentices with differing backgrounds and expectations. The introductory unit consists of five modules designed as self-contained instructional packages which can be used selectively to meet individual and program needs. The modules cover the following topics related to apprenticeship: the agreement and parties involved in the program, costs and benefits of training, legal aspects, historical background, and how to study effectively. The objectives of each module are expressed in terms of expected terminal student performances, and references are listed. The remainder of each module is presented in a three-column format which correlates content with instructional suggestions and background information. The unit also contains sections on administrative considerations and instructional considerations. (Author/MS)

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INTRODUCTION TO APPRENTICESHIP

UNIT 1

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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A CORE CURRICULUM OF RELATED INSTRUCTION FOR APPRENTICES

The University of the State of New York/THE STATE EDUCATION DEPARTMENT
Bureau of Occupational and Career Curriculum Development Albany, New York 12234
1975

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FOREWORD

Apprentice training is a systematic way of providing the skilled workers necessary to supply current and future employment demands. Related instruction is an integral part of a planned apprentice training program — ranking in importance with the skills learned on the job. The related instruction provided to apprentices helps them better understand the trade and to know *why* things are done as well as *how* they are done.

A *Core Curriculum of Related Instruction for Apprentices* was designed to provide relevant instruction to apprentices preparing for a variety of trades. It includes the general topics appropriate to all who will be taking their place in the national workforce. Therefore, presentation of related instruction to a mixed group of apprentices becomes a feasible and manageable activity which helps fulfill the legal requirement for this component of a full apprentice program. It leaves the trade-specific information to be provided as the need arises.

The core curriculum is developed in major units or general topics. Modules within each unit are designed as self-contained instructional packages which can be selected for presentation to meet individual and program needs. The objectives of each module are expressed in terms of expected terminal performances which each apprentice should exhibit as a result of instruction. This allows any apprentice who is able to accomplish the student objectives to move on to another module. The program provides sufficient flexibility for the development of instruction to meet the specific needs of a variety of apprentices with differing backgrounds and expectations.

This unit, *Introduction to Apprenticeship*, is one of nine units that have been developed to provide the apprentice with basic information about his program. It also contains sections on Administrative Considerations and Instructional Considerations which will be helpful to administrators and journeymen/instructors in developing and conducting an approvable course in related instruction.

Content relating to the core curriculum was developed under grant at the New York State School of Industrial and Labor Relations, Cornell University, Ithaca, under the supervision of Professor Felician F. Foltman. Assistance relating to content was provided by Charles A. Stebbins, Associate in the Bureau of Trade and Technical Education, with the concurrence of Carl G. Benenati, Chief, who is responsible for the approval and conduct of related instructions programs for apprentices. The material developed was adapted to a curricular format and prepared for publication by Nelson S. Maurer, Associate in the Bureau of Occupational and Career Curriculum.

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ADMINISTRATIVE CONSIDERATIONS

A comprehensive training program is needed to prepare apprentices not only to develop their own capabilities, but also to meet the ever changing requirements of our industrial technology. Such a program needs positive direction from participating employers, unions, joint apprenticeship committees, and governmental agencies. It is important that each responsible agency clearly understands its role and duties in implementing and evaluating the program so it will be an ongoing project that helps to meet the manpower needs of the country.

TRAINING PROGRAM

Generally, there is an agreement that a training program is needed to develop a well-rounded journeyman rather than a specialist; a journeyman who has the ability to produce high quality work, the initiative to move from one task to another with little supervision, and the determination to see a job through even under difficult circumstances. Such a training system should be developed jointly by all groups concerned.

Many apprentice training programs are sponsored by a joint apprentice committee composed of representatives of labor and management. Sometimes programs are administered unilaterally by labor or management groups. Regardless of the type of program, there must be a body that is actively responsible for directing the training, allocating responsibilities, and formulating and publishing general and specific program objectives. While the foregoing seems obvious, surveys have indicated that many apprenticeship programs do not have a central administrative body.

Each program should have an executive responsible for coordinating the duties of various staff members. He should integrate instruction, supervision, communication, and counseling, and carry out the policies established by the decisionmaking board. Lines of authority and areas of responsibilities should be clearly defined so each person knows and understands his function and place in the total program.

The apprentice program has some unique characteristics, among them is the fact that the administrative responsibility is divided between two state agencies, the Department of Labor, which has the reponsibility for promoting and initiating the program and supervising the on-the-job training portion, and the State Education Department, which has the responsibility for providing and supervising the related instruction portion. In addition, the private sector representing both labor and management have an advisory responsibility through the State Apprenticeship Training Council. This organization is appointed by the Governor and includes equal representation from labor and management with the State Commissioners of Education, Labor, and Commerce as ad hoc members of that council. Moreover, the program is implemented by local counterparts of the State agencies. In addition, labor and management through joint apprenticeship councils are involved on the local level.

Because of the involvement of all these agencies, the management of the program could become cumbersome. Therefore, it is imperative that special efforts be made to insure close program correlation. For example, the instructor should immediately report problems with attendance, reporting, course content and the like to the educational

supervisor of the program. A system has been developed whereby these problems can be resolved quickly on the local level by cooperation between both education and labor representatives or, if necessary, on the State level.

RECRUITMENT

A successful apprenticeship training program needs a number of interested applicants from which to select apprentices. There should be an active public relations program which indicates to high school graduates and other interested persons the opportunities that are available to individuals who successfully complete the apprentice training program. Selection standards should be continually reviewed for the purpose of validating current standards and admission procedures in relation to the needs for skilled journeymen and to broaden the base for selecting candidates.

COURSE CONTENT

Many apprentice training programs select course content based on suggested training schedules. To be effective, these schedules must be based on what the journeymen in the trade are *currently* doing. Also, provision should be made for anticipated technological changes. Once the common operations are identified, a course may be developed into blocks of knowledge and these blocks then broken into units. There needs to be continuing analysis in order to keep the course content up to date and provide for forecasting changes which will affect the skills needed by the journeyman.

ON-THE-JOB TRAINING

The on-the-job training must be broad enough to provide the apprentice with a well-rounded experience. This requires frequent rotation within a variety of work assignments. Also, the journeymen should have time to help and teach the apprentice the necessary skills. The job sites selected should provide for a range of equipment and production tasks. When necessary, arrangements should be made to rotate apprentices to locations where the latest equipment, products, and processes are being used. Firm direction must come from the administrator of the program to see that proper supervision is provided in order that the apprentice receives progressively greater challenges at each level of work experience as well as close correlation between production work and related training. Also, there needs to be an effective method of determining the skill level that the apprentice obtains on the job. The incorporation of these elements will permit the apprentice to develop pride in being a skilled workman and provide the opportunity of earning while learning.

RELATED INSTRUCTION

Related instruction is essential if the apprentice is to receive a well-rounded education rather than simply a set of work experiences which may or may not add up to make a competent craftsman. It should be aimed at helping the apprentice perform his current tasks more efficiently and help him solve new problems as they arise. To properly perform the required skills, an apprentice should know the *how* as well as the *why* of the various operations

related to his trade. If anything, this need is more important as the trades become more technical due to new ways of doing old processes, as well as the introduction of new products and processes.

The material presented in the classroom should relate to what is being learned on the job. This requires effort on the part of the instructor to keep track of the events that are taking place on the job, so the instructions may be presented just before or while the information is being used on the job. New methods, materials, processes, and equipment should be introduced into the training program as early as practicable.

Instructional methods need to be up to date and include the use of teaching aids such as charts, films, filmstrips, models, mockups, and transparencies which make the presentations more effective and interesting. Trade literature could be made available, and used to supplement textbooks when they are used. The reading of trade magazines should be encouraged so that it might be continued when the apprentice becomes a journeyman. Field trips should be used to familiarize the apprentices with innovations and alternative methods that are being introduced. Class size should be kept manageable so the instructor is able to provide the apprentices with individual assistance whenever the need arises. Achievement tests should relate to up-to-date material and be given at various stages in the instruction in order to properly assess the apprentice's progress.

The teacher of related instruction should be a journeyman or have had direct employment in at least one of the areas that are represented by the apprentices in his class. Also, he must have enough training in the techniques of teaching to be able to know what to teach and how to organize material into a logical progression, use a variety of methods to make the presentation interesting and effective, and adapt these methods to the individual needs of the various members of his class. Also, the instructor should have the desire to teach and not accept the job because it was assigned to him. Such an instructor may be found on the occupational education staff of a BOCES area center or community college, or may be a supervising or working journeyman.

APPRENTICE AGREEMENT

Apprentices should be provided copies of their agreement and take time to review the contents so they understand the conditions under which they will be working. The agreements should clearly set forth the period of the indenture, conditions of employment, schedule of work processes, requirements for related instruction, and the responsibilities of both parties. The duration of the apprenticeship should take into account the apprentice's past experiences and training. The goal should be the efficient preparation of a well-rounded journeyman.

RECORDKEEPING

Training records are important and must be kept in order to evaluate the quality of the instructional process, document the progress of the apprentice, maintain a training course composed of relevant and up-to-date material, and issue licenses and certificates to deserving individuals. Arrangements should be made to publicly award certificates to apprentices who have successfully completed the prescribed program.

FINANCING APPRENTICESHIP PROGRAMS

There appears to be no best way to finance the training of apprentices. Some programs are financed through a collective bargaining agreement, subsidized jointly by labor and management or by one party, or supported by public funds. Regardless of the type of financing, success of the program depends on adequate and continuous financing.

INSTRUCTIONAL CONSIDERATIONS

Even though related instruction is generally considered to be an important part of an apprentice's training, a joint survey conducted by the Department of Labor and Education Department indicated that only about 60 percent of 19,000 apprentices contacted received any type of related instruction. Although, it is recognized that there are many well-organized and efficiently run apprentice training programs operating in the State, many communities face the problem of small numbers of apprentices in a wide variety of occupations in different kinds of industries who need, but cannot economically receive, related instruction. In an effort to reach these small groups, a core curriculum was developed that would be appropriate for apprentices in a wide variety of occupations and which would allow these individuals to be scheduled in classes large enough to be academically and financially feasible.

The core curriculum may be used in multi-occupational situations or where no formal apprentice training program is in operation as a basic program. It is to supplement, not supplant, the theoretical trade related instruction. Also, the core curriculum should be used only by those training facilities that want it or need it.

The core curriculum includes a variety of units under the headings of:

Introduction to Apprenticeship
Communications
Human Relations On and Off the Job
Industrial and Labor Relations
Issues in Economics
Mathematics
Personal, Economic, and Financial Security
Safety
Tools

MODULES

Topics under the different main headings are developed into modules which are self-contained. Thus, an instructor is able to select only those modules from any one heading that meet the needs of his group, a process which gives the program flexibility. Because the modules are not interrelated, the instructor can easily accommodate apprentices who join the class at various times during the year.

OBJECTIVES

The objectives for each module are based on the expected terminal performance that each apprentice is to do as a result of the instruction. The instructor should use these objectives as guides when preparing his presentation to see that he covers the topic adequately without bringing in too much irrevelant material. Also, the students should be familiar with the objectives so they know what is expected of them and may determine when they have accomplished it.

FORMAT

A three-column format is used for clarity and simplicity. The first column presents the main points of the unit. The second column gives instructional techniques for presenting a particular point. These helps are mainly for the journeyman who may lack experience in teaching. The trained teacher may use them to stimulate his ingenuity and resourcefulness. References are listed also in the second column. More than one reference is used to make it easier to obtain at least one book and in addition, provide one which gives an overview of the topic as well as one that presents a more extensive coverage of the subject. The third column contains the basic information relating to the topic. This information needs to be supplemented by using at least one of the suggested references.

TEACHING TECHNIQUES

Different types of teaching techniques should be used regularly to get variety into the presentation and maintain student interest. Every effort must be made to keep the instruction relevant and learner centered. The students need to be involved in the instructional process as much as possible by asking them to make specific presentations or by sharing their opinions and experiences. Trade contests and other forms of competition are used to develop a pride of craftsmanship and provide recognition for outstanding talent. At appropriate times, the role-playing technique may be used to give practice or get insights into a particular problem. Foremen, officers, manufacturer representatives, and specialists should be invited to present their viewpoints or demonstrate their products. If an issue is controversial, be sure to present both sides of the topic. Regardless of the method used, instruction takes place only when the apprentice is capable of using or demonstrating the new information.

INSTRUCTIONAL AIDS

The use of different types of instructional aids helps to make the presentations more effective. Pictures, films, filmstrips, slides, and video tapes may be used to clarify a complicated process or demonstrate a specific technique. Models, mockups, and the actual objects may be used to show a new piece of equipment or a new process. The opaque projector is useful to show on a screen graphs, charts, and pictures from text and reference books. The overhead projector effectively presents graph information. Transparencies may be purchased or easily made by the instructor.

INSTRUCTIONAL SITES

The core curriculum may be taught by competent instructors in properly equipped rooms at such locations as company or union facilities, BOCES area centers, community colleges or other suitable educational institutions which offer instruction to apprentices. Community colleges might wish to consider the offering of credit for courses taken by individuals to meet apprenticeship requirements to count towards an academic degree.

The instructor must always consider the apprentice's point of view. Many times the apprentice believes that related class instruction is an imposition. He has spent a full day working and now must take his time (travel and class) for this instruction. For this reasons, the instructor must make the lessons as relevant and interesting as possible. He must not let his presentations degenerate into a series of boring lectures. This will take time, but the rewards of seeing young people grow in knowledge and skills are worth the extra effort.

THE APPRENTICESHIP AGREEMENT AND PARTIES INVOLVED IN THE PROGRAM

Explains the agreement signed by the apprentice and program sponsor, its contents, importance, and the interests of business, labor, and government in the program

OBJECTIVES

At the completion of this module students will be able to:

1 *Explain the purposes and importance of typical apprenticeship agreements*

2 *Identify the major points and specific standards that are included in their apprenticeship agreements*

3 *Explain why misunderstandings occur during the term of an agreement and suggest procedures to follow which might assist in solving such misunderstandings*

REFERENCES

(A) Kursh, Harry. *Apprenticeships in America.* New York, N.Y. Norton and Co., Inc. 1965.

(B) U.S. Department of Labor, Manpower Administration. *The national apprenticeship program.* Washington, D.C. U.S. Government Printing Office. 1972.

(C) _____ *Apprenticeship past and present.* Washington, D.C. U.S. Government Printing Office. 1969.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Purposes and Importance of Agreements (1)	State briefly the purposes and importance of apprenticeship agreements. (Ref. B, p. p. 1) List the various parties usually involved in an apprenticeship agreement and explain the rights and obligations of each. (Ref. A, pp. 43-46) Have students indicate their rights and obligations under an apprenticeship agreement and discuss strengths and desirable changes.	An apprenticeship agreement is a recognized legal contract that specifies the responsibilities of the parties involved including the employer, union, registering agency, and apprentice. It provides guidelines which may be used to evaluate how well all parties are fulfilling their parts of the contract. The contract usually specifies that the employer agrees to hire the apprentice and teach him a trade. The apprentice agrees to work diligently and faithfully during the period of apprenticeship and comply with the proposed training program. The starting date is given along with the required number of hours that must be completed. The approving agencies and the probationary period and conditions are also listed.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Basic Standards (2)	Explain how labor, management, and the government cooperate to develop apprenticeship standards for various crafts and trades. (Ref. C, p. 20) Discuss briefly the various points that are included in most apprenticeable occupations. Ask students to bring to class copies of their agreements and compare their specific standards with the basic list. Be sure each student understands the various parts of his agreement and that he is aware of the obligations and responsibilities of each party involved.	Work processes have been developed for all of the apprenticeable occupations. They assure uniform and effective training procedures necessary to develop the skills required of specific journeymen. These standards must be incorporated in all programs submitted for registration by the State Apprentice Section or Federal Bureau of Apprenticeship and Training. The training standards include such items as work processes, related instruction, progress records, evidence of nondiscrimination, term of apprenticeship, probationary period, and safety training. The administrative standards include union-management approval, wage scale, qualifications, age requirements, legal aspects of apprenticeship, and credit for previous experience.
Problems with Agreements (3)	Discuss some problems that may arise with an agreement and suggest procedures that apprentices might follow to assist in settling such problems. Indicate that an employer may transfer his training responsibilities to another employer in order to give the apprentice the required training. Discuss with students the possibility of having penalities for noncompli-	Problems arise sometimes with agreements because: • Misunderstanding of the rights and obligations of the different parties involved • Work load does not allow the proposed training schedule to be followed. • The agreement is not enforced by the employers, union, or registering agency and apprentices are kept on menial tasks which do not allow them to learn new processes.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Problems with Agreements (cont'd)	cance with the agreement and the extent of these penalties, if any are suggested.	
Governmental Agencies Responsible for Apprentice Training Programs (3)	Invite a representative of the Federal Bureau of Apprenticeship and Training or a member of the New York State Apprentice Training Section to discuss the purposes and importance of apprentice training programs. Have him indicate the reasons for the government's involvement in the programs and explain the services that his agency provides. Have the students express their opinions relative to the government's involvement in the program and indicate advantages and disadvantages to the program resulting from such involvement. (Ref. B, pp. 1-3)	The services performed by Federal and State agencies supervising apprentice training programs include: • Publicizing opportunities that exist for apprentice training and encourage young people to enroll so there will be enough skilled workers in the labor force • Establishing standards for apprentice training programs and see that these standards are met so the term apprentice-trained journeyman means something • Assuring there is no discrimination in the selection of individuals for apprentice training programs • Supervising and evaluating the apprentice's progress in order to protect the apprentice, the trade, and the public. • Encouraging and assist management and labor to develop, expand, and improve programs for apprentices in order to reduce the rate of unemployment and avoid costly labor shortages • Certifying successful graduates of apprentice training programs
Joint Apprenticeship Committees (3)	Explain the purposes, organization, and function of local joint apprenticeship committees (JACs). Determine from the students the sponsors of their programs.	In some industries or occupations a committee with an equal membership representing labor and management work together to sponsor, administer, and supervise local apprentice training programs.

CONTENT	INSTRUCTIONAL SUGGESTIONS
Personnel Responsible for Apprentice Training Programs (3)	Have students indicate the specific individuals they may contact when problems or questions arise relative to their program.

BACKGROUND INFORMATION

The apprentice training representative makes on-the-job visits and is able to assist apprentices with questions or problems that arise which are under the jurisdiction of the New York State Department of Labor. The senior apprentice training representative is in charge of a district office. The district superintendent is in charge of a region (several districts). The administrator of apprentice training is in charge of all programs in the State and is located in Albany.

The instructor of the local apprentice training course is able to help the apprentice with questions or problems that arise which are under the jurisdiction of the New York State Education Department. The representative of the designated local educational agency supervises the related instruction phase of apprentice training at the local level. This individual may be an occupational director at an area BOCES center, the local director of an adult education program, or an AT-706 coordinator. Also, representatives from the Bureau of Trade and Technical Education of the State Education Department supervise local related instruction classes.

Programs sponsored by most unions and JAC's deal with the U.S. Department of Labor. The area apprentice training representative makes on-the-job visits and is able to help the apprentice with problems and questions that arise which are under the jurisdiction of the U.S. Department of Labor. The State supervisor is in charge of all Federal apprentice training programs and is located in Albany.

Veterans who have problems that cannot be solved at any of the preceding levels may obtain assistance from their Veterans Administration representative.

COSTS AND BENEFITS OF APPRENTICE TRAINING

Explains the costs and benefits of apprentice training for the apprentice, employer and/or union

OBJECTIVES

At the completion of this module students will be able to:

1 *List three investments an apprentice may expect to make as a result of being involved in an apprentice training program*

2 *List four benefits an apprentice may expect to receive as a result of completing an apprentice training program*

3 *List four benefits a union may expect to gain as a result of being involved in an apprentice training program*

4 *List two benefits an employer may expect to gain as a result of sponsoring an apprentice training program*

5 *Explain how apprentice training programs help to replensih the needed skilled workers in the labor force*

REFERENCES

(A) Kursh, Harry. *Apprenticeships in America.* New York, N.Y. Norton and Co., Inc. 1965.

(B) U.S. Department of Labor, Manpower Administration. *Apprentice training, a sure way to a skilled craft.* Washington, D.C. U.S. Government Printing Office. 1974.

(C) _____ *Apprenticeship, past and present.* Washington, D.C. U.S. Government Printing Office. 1969.

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CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Cost of Apprentice Training to the Apprentice (1)	Discuss with the students the costs of apprentice training to the apprentice including: • Time spent learning trade • Time spent in related class instruction • Low wages during period of training	Legally the term of apprenticeship is at least 1 year. Programs may extend to 10 years. Many trades have 4-year apprenticeships. These training periods are established by the various trade unions. During the training, the apprentice has to learn the basic processes and then practice them until he becomes proficient. Because of this, the apprentice sometimes has to spend a large amount of time doing simple, uninteresting tasks. For each year registered apprentices are indentured, they are required to spend 144 hours in related instruction classes to learn the theory necessary for their trades.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Cost of Apprentice Training to the Apprentice (cont'd)	Have students discuss their experiences and opinions about the time required for training. Be sure the discussion does not become too one-sided on the negative aspects. (Ref. B, pp. 4-5)	The starting apprentice wage is usually about one-half the journeyman's wage. Also, the journeymen are paid their regular wages for the nonproductive time they spend teaching the apprentice the various skills of the trade.
	Use a chart to compare apprentice training with other methods of career preparation such as a college education considering: • Entrance requirements • Training time • Type of training • Earning during training • Certification upon completion of training • Type of job available upon graduation • Starting salary (current figures)	Apprentice Training versus College Education Item / Apprenticeship / College H.S. diploma: yes / yes Aptitude tests: yes / no College boards: no / yes Supervised on-the-job training: yes / yes Class instruction: yes / yes Usual training period: 4 years / 4 years Paid during training: yes / no Certification upon completion of training: yes / yes
Benefits of Apprentice Training to the Apprentice (2)	Explain the benefits of completing an apprentice training program including: • Well-rounded preparation • Guaranteed wage with regular increases during training • Recognized skills and ability upon completion of training • Adequate preparation for more challenging jobs (Ref. A, pp. 21-30)	Properly administered apprenticeships provide planned, daily, on-the-job training and experiences under proper supervision combined with related instruction. Rotation among different aspects of the job assures that the apprentice will learn all the aspects of the trade and not just a few isolated parts. An apprentice receives periodic wage increases (usually every 6 months) throughout the program so at the completion of the training the wage rate equals that of a journeyman. Veterans may receive additional benefits from government assistance. Thus, an apprentice earns as he learns and by the time he becomes a certified journeyman he has a career rather than just a job.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Benefits of Apprentice Training to the Apprentice (cont'd)	Invite a journeyman who has completed a well-organized apprentice training program to discuss the benefits he has received from his program and also, the sacrifices he had to make during the training period.	The skills of a properly trained apprentice are in demand and he has the freedom to obtain jobs in other parts of the State or country. Also, he is prepared to accept more challenging and responsible jobs in the areas of supervision and management.
Benefits of Apprenticeship to the Union (3)	Discuss with the students the advantages of apprenticeships to the union including: • Some control over the number of people entering the trade • Some control over the instruction and skill level of individuals entering the trade • Protection from undercutting of wages by trainees • An adequate supply of qualified skilled workers • A source of new members	Apprentice training programs give unions some control over the number of persons entering the trade. This tends to prevent the flooding of the union with too many journeymen. Unions that administer apprentice programs have some control over the instructional content and how it is presented and thus the skill level of its people entering the trade. Also, formal training is faster and more complete than informal methods. The apprenticeship agreement specifies a graduated wage scale for the trainees. Because the union has the opportunity of seeing that the terms of the agreement are followed, the apprentices are assured of their regular wage increases. The agreement also sets the wage rate for the apprentices which prevents them from undercutting of the journeymen's wage scale. The journeymen's union wages are protected from the excessive use of apprentices. By having some control over the number of people entering the trade, the union is assured of an adequate supply of qualified people to do the work that is available in the area, protect itself from rival unions, and preserve the status of the occupation. Apprentice training programs provide one means of introducing the trainee to the trade as well as to the union. Thus, union membership is maintained.
Benefits of Apprenticeship to the Employer (4)	Invite an employer who is sponsoring an apprentice training program to discuss	Apprentice training programs sponsored by an employer provide him with a continuous supply of individuals who are trained to meet his specific needs and thus easily adapt to his production methods.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Benefits of Apprenticeship to the Employer (cont'd)	his views of such a program. Compare the employer's views with those of the union on apprentice training programs and discuss the reasons for differences, if any exist.	These individuals are available as replacements for employees who leave or retire or to fill gaps created through expansion by the company. Also, these trained people provide the employer with a source from which he may select his supervisory personnel.
Benefits of Apprenticeship to the Public (5)	Discuss with the students the need to maintain the country's level of skilled workmen and to replace those lost due to retirement, death, and injury. (Ref. C, pp. 19-22) Invite a representative from the Federal Bureau of Apprenticeship and Training to discuss the projected needs of journeymen for various trades.	Surveys reveal that more journeymen are leaving the labor force annually due to retirement, death, or injury than enter by completing an apprenticeship. Thus, apprentice training programs need to be expanded to meet the country's need for skilled manpower. Some estimates indicate that over the next 10 years at least 80 percent of all jobs will require less than a college education.

LEGAL ASPECTS OF APPRENTICESHIP

Explains how Federal and State laws affect apprentice training programs

OBJECTIVES

At the completion of this module students will be able to:

1 *Explain briefly the Federal legislation affecting apprentice training programs*

2 *Explain briefly the State laws affecting apprentice training*

REFERENCES

(A) New York State Education Department. *Registered apprenticeship training in New York State; a joint report.* Albany, N.Y. The Department. 1972.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
The National Apprenticeship Act of 1937 (The Fitzgerald Act) (1)	Discuss how the National Apprenticeship Act affects the local programs of apprentice training. (Ref. A, p. 5)	The National Apprenticeship Act of 1937 authorized the Secretary of Labor to formulate and promote the advancement of labor standards to protect apprentices, establish basic training standards, and assist states to develop their own standards of apprenticeship. The Act is more of a statement of policy than a mandate for action.
	Explain why it is necessary to have standards established for apprentice training programs.	The law reorganized and enlarged the Federal Committee on Apprenticeship to include individuals representing labor and management in the industrial fields plus a member of the U.S. Office of Education. This committee advises the Secretary of Labor on matters relating to apprentice programs. The Bureau of Apprenticeship and Training (B.A.T.) of the Department of Labor's Manpower Administration is the unit that carries out the Secretary of Labor's responsibilities in the area of apprenticeship training.
	Point out the limitations of the Act.	
	Indicate the unit, at the Federal level, that is responsible for local apprentice training programs. (Ref. A, pp. 10-11)	
	Have the students indicate if any Federal official has ever visited their apprentice training programs and specify the services he performed.	

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Federal Veterans Assistance Bills (1)	If any members of the class are veterans, explain that subsistence payments are available and indicate that it is their responsibility to obtain the necessary Certificate of Eligibility. (Ref. A, pp. 5, 8)	Public Law 346, 550, and 90-77 gave veterans financial assistance when they enrolled in a recognized apprentice training program. These laws have been a major factor in the growth of apprentice training programs in the State. The individual veteran is responsible for securing a Certificate of Eligibility from the Veterans Administration.
Antidiscrimination Provisions of the Act (1)	Explain that every effort is being made to eliminate discrimination in the selection of apprentices and to increase the participation of minority groups in the training programs. (Ref. A, pp. 5-6)	In 1964 Title 29, Part 30 was added to the code of Federal Regulations to provide equal opportunity to all individuals seeking apprentice training. An amendment in 1971 provided that sponsors of apprentice training programs carry out plans to increase minority participation in their programs. To give these new standards meaning, the Secretary of Labor was given the authority to deregister programs that do not comply.
State Labor Law Article 23 (2)	Discuss briefly the provisions of the New York State Apprenticeship Law. Indicate the different sections and bureaus that have the responsibility of administering the provisions of the Article 23. Discuss the limitations of the law. Explain what is meant by a registered apprentice. Discuss briefly the standards suggested by the Act for apprenticeship agreements.	In 1945 Article 23 was added to the State Labor Law which established training standards and provided a staff to encourage labor and industry to set up apprentice training programs. Sponsors who do not register their programs are outside the jurisdiction of the law. The State's power is limited to being able to deregister programs that do not comply with the standards. The Apprentice Training Section of the Office of Manpower Development carries out the Industrial Commissioner's responsibilities related to apprentice programs. The Bureau of Trade and Technical Education carries out the responsibilities of the Education Department for related instruction classes. According to Article 23, apprenticeship agreements should include the following items: • Trade or craft being taught and the total hours required

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
State Labor Law Article 23 (cont'd)	Explain why the standards are necessary and whether or not they are sufficient for today's needs. (Ref. A, pp. 36-37) Have students indicate how many of the standards their own programs meet. Invite an area representative of the Federal Bureau of Apprenticeship and Training or the New York State Apprentice Training Section to discuss the purposes and implementation of the suggested standards for apprenticeship agreements.	• Work processes being taught and approximate time spent on each process • Hours spent working on the job (at least 4,000 hours) and hours spent on related instruction (at least 144 hours per year) • Minimum age of 16 • Selection of apprentices nondiscriminatory • Wage scale progressively increased • Probationary period during which agreement may be terminated by either party • Services of Industrial Commissioner may be used to settle disputes • Employer may transfer his training obligations to another employer
Antidiscrimination Provisions of the State Law (2)	Compare the effectiveness of the State law prohibiting discrimination with the comparable Federal law.	In 1964 Section 296 of the Executive Law was adopted to prevent discrimination in any phase of registered apprentice programs based on race, creed, color, or national origin. In some aspects the State's code is more specific and stringent than its Federal counterpart. A 1972 regulation mandated that all sponsors of registered apprentice training programs implement plans to increase minority participation in their programs. The Industrial Commission is authorized to deregister programs which do not comply.

UNIT 1

MODULE 4

HISTORICAL BACKGROUND OF APPRENTICESHIP

Explains the origins of apprenticeship programs and their development in the United States

OBJECTIVES

At the completion of this module students will be able to:

1 *Explain how apprenticeship programs developed as part of the guild system*

2 *Compare the colonial American apprenticeship system with the European and English systems*

3 *Point out the benefits of the early American apprenticeships to the master, the apprentice, and to the public*

4 *Describe what it was like to be an apprentice in colonial America*

5 *Explain how the development of the factory system affected the apprenticeship system*

REFERENCES

(A) Dulles, F.R. *Labor in America.* 3d. ed. New York, N.Y. Thomas Y. Crowell Co. 1966.

(B) Seybolt, R.F. *Apprenticeship and apprenticeship education in colonial New England and New York.* New York, N.Y. Arno Press. 1969.

(C) U.S. Department of Labor, Manpower Administration. *Apprenticeship — past and present.* Washington, D.C. U.S. Government Printing Office. 1969.

CONTENT	INSTRUCTIONAL SUGGESTIONS
Craft Guilds and Apprenticeship (1)	Explain how apprenticeships were a part of the guild system which developed in Europe around the twelfth century. (Ref. B, pp. 1-21)

BACKGROUND INFORMATION

By the early part of the twelfth century, craftsmen from different occupations were organizing themselves into groups called guilds. Membership in the guilds consisted of master craftsmen, journeymen, and apprentices. Only master craftsmen could contract for work and hire others to work for them so, in fact, they controlled the right to work. The guilds early recognized the value of apprenticeships and soon required all craftsmen to have a period of training before being admitted to the trade as a journeyman.

Voluntary apprenticeships were often contracted by age 12 and usually lasted until the person was 24 years old for males and 21 years old for females. Apprentices lived with the masters the entire training period. The masters were responsible for teaching the apprentices a trade and their moral conduct and for providing them with food, clothing, and shelter. Later, apprenticeships were used to take care of the children of the poor. These involuntary apprenticeships were often contracted at a very early age.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Apprenticeships in Colonial America (2)	Compare the colonial American apprenticeship system with the European and English systems. (Ref. C, pp. 2-4)	The colonist brought to America most of the characteristics of the European and English systems of apprenticeships which included controlling the quantity and quality of craftsmen needed for a growing country, supervising the moral education of young people, and caring for the children of the poor at no cost to the community..
	Discuss the types of apprenticeships that developed in colonial America. (Ref. C, pp. 1, 6-7)	The system developed voluntary apprenticeships where individuals bound themselves by their own consent to masters to learn a trade and compulsory apprenticeships where town officials bound orphans and young children of the poor to masters who would provide for their care and education. This latter type of apprentice resembled a form of involuntary servitude.
	Explain the difference between the indentured apprentice and the indentured servant. (Ref. A, pp. 1-10; Ref. C, pp. 7-8)	Most apprenticeships were in the northern colonies because skilled labor was needed for the rapidly expanding industries. Apprentices were generally individuals who were born in this country and an effort was made to train them to be skilled craftsmen. Because the southern colonies were agriculturally oriented, help was needed to work in the fields and country homes. Many of the people who came to this section were poor so they were indentured to pay for their passage to America. Some individuals had a trade but others were vagabonds, paupers, and convicts sentenced to America along with many children who had no means of support. Unfortunately, there was little interest in teaching these indentured servants a trade. The abuses to both apprentices and indentured servants were notorious in colonial America.
Benefits of Early American Apprenticeships (3)	Discuss the benefits of the apprenticeship system to the master, the apprentice, and the public. (Ref. B, pp. 22-35, Ref. C, pp. 1-2, 6-7).	The period of apprenticeship was generally at least 7 years or until the individual reached the age of 21 for boys and the age of 18 for girls, unless they married earlier. The apprentice lived in the master's house and was furnished food and clothing, and also taught the skills of a trade along with reading and writing. The master received the services of the apprentice free, except for the cost of the board, lodging, and clothes. The apprenticeship system provided the masters with a control of the number of trained craftsmen entering the field as well as their skill level.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Benefits of Early American Apprenticeships (cont'd)		In the absence of free schools, the public viewed apprenticeships as a method of providing a basic education for those who could not afford a private school as well as a means of taking care of orphans and children of the poor without any cost to the community. To reduce the exploition of these poor apprentices, the masters were required also to teach them a useful trade. Also, towns passed laws which prohibited anyone from opening a shop unless he was 21 years old and had served at least a 7 year apprenticeship. This tended to control the quality of work available in the various towns.
Life of an Early American Apprentice (4)	Describe what it was like to be an apprentice in colonial America. (Ref. A, pp. 11-19; Ref. B, pp. 35-65; Ref. C, pp. 7-9). Ask students to compare colonical apprenticeship with today's apprenticeships.	Generally, a father would contract with a master to teach his child, many times under 10 years of age, a trade. This action required an agreement which stated the obligation of both parties. This agreement, called an indenture, was a legal document and was registered with the town officals. If either party violated this agreement they were subject to punishment by the town authorities. The master was responsible for teaching the child a trade as well as providing him board, lodging, and clothing. Also, the master was required to teach the apprentice how to read and write and do basic arithmetic. The apprenticeship lasted for at least 7 years or until the young man was 21 years old. The apprentice was to provide faithful service, not reveal any secrets of the trade he was being taught, live a moral life, and not drink, gamble, or otherwise bring disrespect to his master. The master was responsible for the apprentice and as a result had absolute control over him which many times reduced the individual to a condition of a servant. Because the apprentice "lived in" with the master, he was often required to perform household chores in addition to working in the master's shop. These extra duties were used, at times, to lengthen the period of apprenticeship. The apprentices were subject to whippings and corporal punishment for disobedience, laziness, or immoral acts. Occasionally, the treatment was so oppressive that the apprentice ran away. If apprehended and brought back, he would have to serve a longer time than stated in the original agreement. Masters who mistreated their apprentices were fined by the town officials.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Life of an Early American Apprentice (cont'd)		Apprentices who were not being taught reading and writing were transferred to a master who would provide such training. With the apprentice's permission, a master could sell some of the years of service to another master. Such transfers were always registered in the town records. If a master died before the term of the agreement was completed, the apprentice served out his time with an heir. The hours of work for the apprentices were long and hard. If the apprentice endured the full term of his training, he was usually given two suits of clothing, a small lump sum of money, and perhaps some tools.
Decline of Early American Apprenticeships (5)	Explain how the development of factories contributed to the decline of the apprenticeship system.	The apprenticeship system provided the main method of vocational training until about the middle of the eighteenth century when the handicraft system began to give away to the factory system. As the workers moved away from the small craft shops and into the factories, the masters lost control over the number of journeymen entering the various trades. Factory operators hired many young children and women as apprentices to perform simple machine operations for which they were paid little and taught less. After completing their time of apprenticeship, they would ask for journeymen's wages but would be discharged and another group of apprentices would be hired. This flooded the labor market with poorly trained individuals. Soon the apprenticeship system lost its educational purpose and became a way of exploiting the poor. Because of these abuses, the first unions were against apprenticeship programs. By the early 1800's, labor groups began pushing for the regulation of both the number of apprentices trained and the quality of their training.

HOW TO STUDY EFFECTIVELY

Explains the need for learning both on the job and in the classroom and suggests techniques for improving a person's study habits

OBJECTIVES

At the completion of this module students will be able to:

1 *Explain the advantages of using effective study habits*

2 *Develop and follow a schedule so that time is used more efficiently*

3 *Use study techniques which will make learning easier and more effective*

4 *Improve their listening ability*

5 *Improve their ability to retain learned information*

6 *Express themselves better when writing an examination*

7 *Improve their rate of reading and comprehending printed materials*

REFERENCES

(A) Gerken, C. d'A. *Study your way through school.* Chicago, Ill. Science Research Associates, Inc. 1953.

(B) Lewis, Norman. *How to read better and faster;* 3d. ed. New York, N.Y. Thomas Y. Crowell Co. 1958.

(C) Pauk, Walter. *How to study in college;* 2d. ed. Boston, Mass. Houghton Mifflin Co. 1974.

(D) Preston, R.C. & Botel, Morton. *How to study.* Chicago, Ill. Science Research Associates, Inc. 1974.

(E) Witty, Paul. *How to become a better reader.* Chicago, Ill. Science Research Associates, Inc. 1974.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Importance of Effective Study Habits (1)	Discuss the importance of using effective study habits. (Ref. C, pp. 3-10) Have students state at least one thing they have learned recently and indicate how they learned it and comment on the effectiveness of the method used. Explain how a person may improve his study habits. (Ref. D, pp. 1-3)	Generally, learning is associated with school but in reality learning is a continuous process. Studying is one way of learning new material. Studying cannot be done without work but it can be done easier if a person knows how and uses some recognized study techniques. Nothing improves one's attitude toward studying as much as having done it well enough to pass an examination and then to go on and use the newly acquired knowledge for one's own benefit. Most everyone who wants to can improve his study habits by following a few important rules. Studies have shown that students can save from one-fourth to one-third of their study time if they would

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Importance of Effective Study Habits (cont'd)		systematize their efforts and follow some principles of learning. A person may improve his study habits by: • Making and following a time schedule • Developing a suitable place to study • Continuing to study until at least a major task is finished • Keeping up with daily assignments • Setting realistic daily goals of accomplishment • Taking constructive action to meet each problem • Doing his best in all situations
Developing a Time Schedule (2)	Discuss the value of making a time schedule. Indicate that planning helps many successful people accomplish most of the things that need to be done in the course of their busy days. (Ref. D, pp. 147-158)	Many people seldom have enough time to do all the things they want to do. At work, the person who can do something faster and better than the others usually gets the job. Normally, time taken to plan for different activities is well spent. Time may be gained by doing the job more efficiently and by using small blocks of time that are generally wasted. The student who works full time must use both his time and energy very carefully. He needs to devise ways to use scattered bits of time and to arrange the study materials so they may be used whenever such time becomes available.
	Explain how to develop a time schedule. Emphasize the importance of setting realistic goals. (Ref. A, pp. 7-11; Ref. C, pp. 18-32)	To develop a schedule including time for studying, a person needs to: • List jobs that need doing and then arrange them according to their priorities. Plan your work and work your plan. • Plan blocks of time; study for 40-50 minutes and take a 5-to 7-minute break. Don't overdo the break period. • Avoid too much detail in the schedule. • Make good use of small bits of time. • Prepare small cards (3 x 5) that contain information to be learned which may be used during short 5- or 10-minute study periods. Also, record notes on cassettes and play them back during short study periods. • Estimate twice the time needed to complete a job. • Start long jobs ahead of time. • Eat well-balanced meals and allow enough time to get sufficient sleep. • Study by the assignment, rather than by the hour. This gives an incentive for doing the job quickly and efficiently.
	Have students keep a record of their daily activities for a week. Then, have them review these records to see if changes can be made which would improve their use of time.	
	Have students develop lists of jobs that need doing, and arrange them in an	

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Developing a Time Schedule (Cont'd)	order of importance. Then, ask the students to check off items as they are completed. Have students comment on the success of the method to improve their ability to get things done. Have students develop and follow their own time schedule. Emphasize the importance of setting realistic time limits. Have students comment on their use of a time schedule.	• Study before a recitation-type class and after a lecture-type class. • Plan to arrive at work, classes, and appointments at least a little ahead of time to allow for unscheduled delays. • Plan some time for recreational activities. Mix with people and learn how to get along with others. In any type of schedule, the fixed activities are planned first such as working, meetings, classes, travel time, and eating and sleeping. Other activities such as studying, doing assignments, reading, and recreation are planned around the fixed activities. Usually, successful students develop and use time schedules.
Developing Effective Study Habits (3)	Describe how to create an environment that is conducive to studying. (Ref. A, pp. 12-16) Have students comment on their study places and suggest possible changes which would improve their study habits.	Studying is done more efficiently in an environment conducive to concentrating. To develop such an environment, a person should: • Study at one table or desk that is as far away from distractions as possible and equipped only with writing and studying materials. Use this place only for studying and have all needed items at hand before starting to study. • Have the study desk uniformly illuminated with indirect or semi-direct light that has no glare of shadows. A two-tube fluorescent lamp is best. • Be physically and mentally ready to study. Wear glasses if they are needed. Be in good health and also aware that certain types of medication (prescribed or over-the-counter) may interfere with one's ability to concentrate. • Adjust the temperature of the room so that, if anything, it is on the cool side.
	Explain how to minimize external distractions when studying. (Ref. C, pp. 35-40) Ask students to indicate	Concentration can be improved by reducing external distractions. To reduce external distractions a person should: • Turn off the radio, TV, or stereo. • Avoid distractions and ignore them when they do occur. • Work under pressure to complete the task as soon as possible.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Developing Effective Study Habits (cont'd)	things they do to minimize external distractions when they study.	• Study by the job, not by the hour. Set realistic goals so tasks can be accomplished.
	Discuss how to avoid internal distractions when studying. (Ref. C, pp. 40-43)	Concentration can be improved by reducing internal distractions. To reduce internal distractions, a person should:
	Ask students to indicate things they do to minimize internal distractions when they study.	• Set a definite time to start studying and begin at once with all the drive he can muster. Do not wait for an inspiration to start studying, but develop the habit of starting immediately. • Plan the order in which the various jobs will be done. • Look upon studying as an opportunity to learn rather than an unpleasant task that has to be done. • Be alert to shifts in attention and quickly come back to the task at hand. Every time there is a lapse in concentration place a checkmark on a piece of paper and try to reduce the marks over a period of time.
	Indicate how a person may improve his concentration when studying.	When studying, a person may improve his concentration by: • Reading several paragraphs and then writing down the main points that were covered • Doing things the way they will be done at examination time
	List ways of reducing fatigue when studying. (Ref. C, pp. 43-51)	When studying, a person may reduce fatigue by:
	Ask students to indicate things they do to reduce fatigue when they study.	• Keeping in good health by eating nourishing meals regularly, taking some form of exercise daily, and getting adequate rest every night. Shortening the rest period for studying is a losing game. Sleepiness might be the result of boredom so take a short break or change to another subject for a little while. • Developing satisfactory ways of dealing with personal problems. If a problem comes up, write it down, and deal with it later. • Participating in some type of relaxation every day.
Taking Class Notes (3)	Describe some techniques which will assist students	Notes that are taken in class help to make a record of the concepts presented by the instructor. Class notes may be kept in a large,

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Taking Class Notes (cont'd)	to take effective class notes. (Ref. A, pp. 33-38; Ref. C, pp. 125-139, Ref. D, pp. 102-117)	looseleaf notebook. In order to have effective notes, a person should follow a systematic procedure for recording class information. One system of note-taking that may be used follows the five R's. Record (legibly) Reduce (summarize) Recite (using the recall column) Reflect (separate opinions from facts) Review (weekly)
	Ask students to indicate how they take notes in class. Offer suggestions which would help them improve their note-taking ability.	The system suggests dividing the notepaper by drawing a vertical line about 2 1/2 inches from the left edge. The right-hand side is used for notes taken in class. Later, when the notes are studied, use the left-hand side for key words and phrases that reflect the material taken in class. Notes for each class should be identified by placing the name of the course and date at the top of each page. Notes for each course should be kept in order and placed together in one section of the notebook. In class, a person should concentrate on what is being said in order to detect the main points and pay little attention to the speaker's mannerisms, quality of voice, or method of delivery. He should be alert to things being emphasized by the instructor which might appear on a test. Some instructors become rushed near the end of the class so it is important to pay close attention to the materials given at this time. Also, questions should be asked at the proper time to clarify information presented by the instructor. The notes taken in class should be brief and clear and reflect the concepts expressed by the instructor. Notes should be written legibly, in paragraph form, and be meaningful several weeks after they were taken. When phrases and ideas are missed, blanks should be left and filled in later with information obtained from the instructor or fellow students. The use of abbreviations helps to save time for writing and listening. The notes taken should relate to the previous notes in order to develop a unified mass of information.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
		A person should look over his notes as soon as possible after class and make words more legible and fill in any blank spaces. During the studying process, a person should write, in the left-hand side of the paper, key words and phrases which reflect the information contained in the right-hand side. If the notes are taken carefully enough the first time, they should not have to be completely rewritten. The notes should now be reviewed by covering the right-hand side of the paper and, using the key words as cues, recite the facts as clearly and completely as possible. Then, a person should check the accuracy of the material just recited with the class notes and correct any misinformation. By frequently reviewing the class notes, a person should be able to reduce the time needed to prepare for an examination.
Improving One's Listening Ability (4)	Explain some distractions to listening. Compare the characteristics of a good listener with those of a good reader.	Many people experience a 75 percent loss of information because of poor listening habits. Some obstacles to effective listening include: • Outside distractions (noise, talking, moving objects, poor physical conditions of room) • Inner distractions (personal problems, planning for an event, daydreaming, physical discomfort) • Lack of interest in subject • Mannerisms of speaker (monotone delivery, nervous gestures) • Emotional subject (personal bias, words, phrases)
	Suggest how a person may improve his ability to listen. Role play several situations in which one student, playing a supervisor, gives directions to another student, a worker, for doing something or going some place.	A person may improve his ability to listen by: • Being in good health and mentally alert • Concentrating on the message, not on the speaker or his mannerisms • Maintaining a positive attitude toward the situation • Identifying main ideas or points and relating these to facts already understood • Listening from the speaker's point of view • Paying attention to what is said as well as to what is not said

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Improving One's Listening Ability (cont'd)	Then, see if the worker is able to do what was explained. Develop some planned distractions during the explanations. Reverse the roles to give individuals experience in giving clear concise directions as well as listening to and comprehending instructions.	• Watching as well as listening • Keeping from being emotionally involved • Asking questions at the appropriate time to clarify any information not understood. These hints are helpful also in situations on the job when a supervisor explains something or gives directions. In the later case, the person should be sure he really understands what he is to do and, if not, to ask questions to clarify any points that are in doubt.
Using a Textbook (3)	Explain how to study a textbook to make learning easier and more efficient. (Ref. A, pp. 17-20; Ref. C, pp. 140-166; Ref. D, pp. 9-44) Discuss the use of previewing for other types of printed matter such as magazines, newspapers, and nonfiction books.	First, a person should become familiar with the text by reading the table of contents, preface, and introduction. This should be done several times over a period of a couple of weeks to get the author's point of view and an insight into the problems he is dealing with and why he thinks they are important. This helps to relate the new material to past information and makes learning faster, easier, and more lasting. Next, a person should use a system for studying the text. One system a person may use is the SQ3R (survey, question, read, recite, review) method. This method increases a person's concentration and comprehension and develops his organizational skills of taking notes and outlining by using the following steps: • *Survey:* To get a general overview of the content and main points, survey the assigned reading by looking rapidly over the title; introductory paragraph; last paragraph or summary; headings and subheadings; pictures, graphs, and, charts; and any questions at the beginning or ending of chapter. • *Question:* Turn the headings into questions to arouse one's curiosity and give a purpose for the assignment. When reading technical information, such questions help to relate the explanatory materials to the important points and give more meaning to the details.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Using a Textbook (cont'd)	Have students indicate cues they use to identify important facts when they read an assignment.	• *Read:* Read the assignment to answer the question posed by each heading. Make use of cues for emphasizing important facts or concepts such as italics, boldface type, illustrations, signal words (first, further, and therefore) and space used. Technical material is usually organized by structural components, cause and effect, sequence of events, or comparisons and contrasts and written concisely with only enough details to clarify or elaborate the main idea. Comprehension is improved by correlating the information given in the diagrams, charts, tables, and graphs with the text.
	Ask students to bring in the same edition of a local newspaper. Select an article and have them underline key words and phrases. Compare the underlined words of several students and discuss how to distinguish between important and unimportant facts.	Sometimes marking the textbook helps to improve one's comprehension of the material being studied. This activity forces a person to search for the main points. Careful marking can shorten the time needed for review. One should read the section before marking and be very selective in the material underlined but not so selective that it is hard to reconstruct the meaning when reviewing the section. The marking should be neat, systematic, and consistent. Also, a concise summary of the notes made in the margins is helpful when reviewing the material.
	Assign another article from the same newspaper and have students make notes on the material read. Ask several of them to read their notes and offer suggestions which would improve their note-taking ability.	Another system for improving one's comprehension is to make notes of the material read. This process forces a person to concentrate and keep alert, and makes the reviewing of several sheets of notes easier than a whole chapter of printed matter. The section should be read first before making notes. Then, look over the notes to be sure they say what they are supposed to and are clear enough to be understood several weeks or months later. A good set of notes are brief and clear.
		• *Recite:* After reading a section, a person should cover the material and recite briefly the answers to the questions posed for that section. This process should be continued until the entire assignment is completed.
		• *Review:* The notes should be reviewed at the completion of the study period. First, recall the main points, and then the subpoints or details. For maximum efficiency, quickly review

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
		yesterday's assignment at the conclusion of the study period. By following this method of studying, learning should be easier and more efficient.
Improving One's Memory (5)	Develop some items that relate to the forgetting process. (Ref. C, pp. 52-60)	Forgetting happens to everyone and it destroys much of what a person has endeavored to learn. Some items that relate to the forgetting process include: • Forgetting begins the moment learning takes place • Interference is the greatest single cause of forgetting • Failure to use the information learned contributes to forgetting • Most of the forgetting takes place a short time after learning ends.
	Describe some techniques a person may use to improve his memory. (Ref. C, pp. 61-78; Ref. D, pp. 35-44) Demonstrate these techniques by developing a set of five facts about a well-known person. Have students learn these facts and then indicate how long it took and the techniques they used. Offer suggestions which would improve their memory. Develop with students a study-habits inventory to help them analyze their present study methods, change those techniques that are	A person's memory may be improved by first learning the material thoroughly and then applying the following principles. • Be actively interested in the material being studied. • Be selective and decide which facts to learn and which ones can be safely ignored. • Learn with the intention of remembering by paying full attention to the task at hand, getting the information right the first time (emphasizing accuracy not speed), and understanding thoroughly the material being learned. Overlearning helps long-range retention. • Have a basic background in the subject being learned in order to relate new material to information already learned. • Organize material to be learned into categories that are meaningful or select key words to serve as guides for the facts to be remembered. • Recite aloud the information that is to be learned to help transfer the material from short-term memory to long-term memory and also promote the consolidation of the material learned. • Use short practice periods broken by brief rest intervals. • Visualize the materials that are to be learned. Select the most appropriate method for memorizing any information being learned.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Improving One's Memory (cont'd)	ineffective, and develop new ways which will improve their learning efficiency. (Ref. A, pp. 46-47; Ref. D, pp. 159-163)	• Review material shortly after it has been presented and repeat the process from time to time.
Preparing for Examinations (6)	Explain how to prepare for an examination. (Ref. A, pp. 20-23; Ref. C, pp. 167-175; Ref. D, pp. 118-129) Ask students to indicate how they prepare for an examination. Offer suggestions which would improve their preparation procedures.	A person starts preparing for an exam by taking acceptable class notes. Review and study these notes as soon as possible after class and again several days later. This method produces a set of well organized, slightly reviewed notes that are ready for final studying. Organize the material being studied into separate blocks or categories and develop cues for each block of information to make it easier to recall at examination time. A person should give special attention to difficult sections. Consolidate the main points into a summary sheet for quick review. Also, a person should keep up to date with all textbook assignments. Either underline or make usable notes of the information studied. This system provides for a quick review of all textbook assignments. A person should find out from the instructor the material that will be included on the test and the type of questions that will be used. He may also try to predict some of the questions that might appear. An objective-type exam requires the memorization of facts, but an essay-type exam requires the understanding of general concepts and theories. *Students should be told the material that is to be covered on each test as well as the type of questions that will be used.* At the conclusion of studying, a person should retire so that consolidation of the material learned can take place. Getting a good night's rest before an examination is all part of being properly prepared. Usually, using rest time for studying is a self-defeating process. It seldom pays to cram intensively before an examination.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Preparing for Examinations (cont'd)		A person is able to retain about 80 percent of any material learned if he keeps up to date with all assignments, studies carefully the class and textbook notes, and reviews the information periodically.
Taking Examinations (6)	Indicate ways of reducing examination "jitters." (Ref. A, pp. 39-40; Ref. C, pp. 176-178)	Examinations show the student and the instructor the progress the student is making. A person should think positively toward an exam, develop the attitude of doing his best, and concentrate on the answers, not on the results. He should be rested so his mind is alert and be prepared properly so he cannot be panicked by unexpected questions. Arrive early at the exam room and sit where there will be a minimum of distractions and the chalkboard is easily seen. Reduce the tension of the exam by quietly relaxing. Too much conversation is apt to break a person's mental set.
	Develop with the class ways of reducing emotional tension which may occur during an examination.	
	Discuss how to answer objective-type questions. (Ref. A, pp. 40-41; Ref. C, pp. 181-185; Ref. D, pp. 136-146)	A person should read the test directions twice. Answer all the questions if there is no penalty for wrong answers. If there is a penalty, a person should answer only those questions that he is sure of. Notice such words as *all*, *always*, *not*, *never*, and *only* which allow for no exceptions, and such words as *usually*, *most*, *generally*, and *may* which allow for exceptions. On multiple-choice questions, a person can usually eliminate all but two or three answers immediately. Go through the test and answer all the questions that can be done quickly, then, do the ones which require more time. A person should make a time plan and follow it, but allow enough time to go over questions that need a second look. When reviewing a test, do not change guessed at answers unless there is an obvious mistake.
	Show how a test mark changes when figured by counting only right answers and by counting right answers minus wrong.	
	Discuss how to answer essay-type questions. (Ref. A, pp. 41-43; Ref. C, pp. 178-181; Ref. D, pp. 130-136)	Essay questions require the recall of facts and also the ability to organize these facts into sentences and paragraphs. A person should read the directions carefully noting how the questions are to be answered (list, explain, discuss, compare, or evaluate), any time limits given, and any choices. If there are choices, a person should read all the questions and select those for which he is best prepared. Knowing what is needed for each question reduces the chances of a person overwriting the answer. As the questions are read, a person should jot down key words or phrases. This procedure builds confidence and helps to organize the answers.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Taking Examinations (cont'd)		It is important for a person to make a time plan and follow it. He should answer the easier questions first to develop an answering attitude and build confidence. Before starting to write know exactly what is wanted. To produce a direct and forceful answer, use a part of the question in the first sentence. Develop the rest of the answer around this sentence. Use transitional words to go from one point to another. It is suggested to leave space between answers for the addition of any appropriate information. Do not take too much time with a question but leave enough space and go on to the next one. If time gets short, outline the remaining unanswered questions. Before turning in the exam, a person should check to see that all the questions have been properly answered. Also, check for errors in grammar and spelling and correct any poor handwriting. A neat, legible, well-organized examination affects the exam mark. It is suggested to always review a returned examination to determine how to do better on the next one. Also, study any comments made by the instructor.
Improving One's Rate of Comprehending Printed Material (7)	Indicate the importance of being able to read rapidly. (Ref. B, pp. 1-19; Ref. E, pp. 1-7, 14-18, 25-28, 35-39) Develop with the students a checklist which will indicate their reading needs and have them suggest ways of meeting these needs. (Ref. E, pp. 37-39) Discuss when to use different rates of reading. (Ref. B, pp. 23-49, 95-131, 250-346; Ref. E,	In today's world, a person must read more than he did before to keep up to date. To get ahead, one has to do more than keep up. A person needs to read to be informed about the latest technological changes that are taking place in his trade. Reading also provides a person with a source of news and recreation. Many individuals read slowly because they read inefficiently. Poor reading habits may be eliminated by developing an aggressive approach to comprehension and reducing the timelag between the act of seeing and the mental interpretation of what was seen. As a result of increasing one's rate of reading and comprehending printed material, a person has more time available for other activities. An efficient reader adapts his rate of reading to the type of material being read. The reading rate is affected by: • Difficulty of the material

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Improving One's Rate of Comprehending Printed Material (cont'd)	pp. 84-88, 94-100, 119-129, 183-185)	• Familiarity with the vocabulary • Purpose of the reading • Reading habits • Personal health The various reading speeds a person may use are given below. • Scanning is done very fast to relocate a specific fact previously read. • Skimming is reading very rapidly to find the author's method of organization, get the general idea of the book to see if it contains the desired information, determine the main points, find the answers to a specific problem, look for new ideas, or refresh one's memory when reading familiar material. • Prereading is done at a fast rate in preparation for a more thorough reading. It is accomplished by reading the table of contents, the chapter summary, headings, the introduction, first sentence of succeeding paragraphs, and the captions of pictures, tables, and graphs. This helps to create a mental set. • Study-type reading is done slower for thoroughness to get a good understanding of the material, to collect information for a report, or to make a summary or an outline. Some re-reading does occur. • Deliberate reading is done at a slow rate to evaluate material, read difficult or unfamiliar material, or find a solution to a problem. Rereading occurs often.
	Describe how to improve one's rate of reading. (Ref. B, pp. 51-97, 347-398; Ref. E, pp. 46-53, 60-66, 72-77, 172-176, 226-230, 242-246)	During reading, the eyes move across the page in a series of stops and starts. Reading is done when the eyes stop. A person's rate of reading depends on the number of stops and the duration of each stop. A person's rate of reading may be increased by: • Eliminating voice box and lip movements when reading. Read by thinking the words. Read with expression to put words into meaningful groups. • Reading for ideas, not words. Avoid looking at each word but read phrases instead.

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Improving One's Rate of Comprehending Printed Material (cont'd)		• Getting the main thought out of each paragraph by reading the first or last sentence. • Reducing regression or rereading to a minimum by reading on and see if later sentences may not clarify the point. • Looking for definite things such as main points, answers to questions, or solutions to problems. • Being forced to read faster. Take time tests on various types of materials and strive to increase reading rate.
	Discuss how to increase one's reading comprehension. (Ref. B, pp. 19-22, 167-249; Ref. E, pp. 107-112)	A person's comprehension, but not necessarily his speed, may be increased by using the: • Table of Contents for an overview of the book • Preface for an explanation of the importance of the subject, the organization of the entire book, and how this approach differs from other approaches • Type of arrangement (chronological, spatial, or topical) to assist in organizing the ideas and main points into logical groups • Headings to show the chief divisions of the chapters • Introductory paragraphs to indicate what is coming next • Topical sentences to give the main thought of a paragraph • Signal words to show relationships among existing points (additive, amplification, repetitive, qualifying, cause and effect, and summary) • Transitional phrases, sentences, or paragraphs to indicate when the author is passing from one idea to another • Tables, graphs, diagrams, and pictures for a visual presentation of factual information • Summary to bring together and relate the important points previously stated (Read it first to get an idea of what is coming and again at the end to check the understanding of the material read.)
	Summarize the techniques a person may use to increase his comprehension of printed materials. (Ref. B, pp. 19-22; Ref. D, pp. 63-71)	In general, one's reading speed and comprehension may be improved by: • Increasing the amount of printed materials read • Reading for main ideas • Reading material that is challenging

CONTENT	INSTRUCTIONAL SUGGESTIONS	BACKGROUND INFORMATION
Improving One's Rate of Comprehending Printed Material (cont'd)		• Reading under a slight pressure to complete the material within a stated time • Eliminating distractions and concentrating on the material being read • Building a stronger and more precise vocabulary • Relating the material read to one's own thinking, to the author's reliability and use of words, and to the validity of the statements and ideas presented • Reading good books to build a background of ideas, concepts, and events that will give meaning to future reading

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